

Remarks

The instant (second) final Office Action again fails to address claims 18-22 under the Section 112(2) rejection. While the claims are listed in the statement of rejection, the rejection is based solely upon limitations of independent claim 1, failing to provide any rationale behind the rejection of independent claim 18 and the claims that depend therefrom. The rejection and finality of the instant Office Action are therefore also improper. In addition to the above, the Section 102 and 103 rejections have ignored multiple claim limitations including those in the independent claims, thus failing to establish correspondence and/or a *prima facie* case of obviousness. The following more particularly addresses these matters and exemplary limitations to which the Office Action has not shown correspondence.

The instant Office Action dated August 15, 2008 indicated that claims 1-11 and 17-22 stand rejected under 35 U.S.C. §112(2); claims 1-7, 9-11 and 17-22 stand rejected under 35 U.S.C. §102(b) over Ovshinsky *et al.* (US Patent No. 5,912,839); and claim 8 stands rejected under 35 U.S.C. §103(a) over Ovshinsky. Applicant traverses all rejections, and does not acquiesce to any averments made in the Office Action. Moreover, as the Office Action has not addressed all of Applicant's arguments made in the previous responses of record (which is contrary to requirements in the M.P.E.P. and relevant law), Applicant incorporates the remarks made in the Office Action Response filed on July 29, 2008 in their entirety.

The Section 112(2) rejection is improper because no issue is presented with any limitation of independent claim 18 or its dependent claims, and thus the Applicant has not been apprised of the rationale behind the rejection. The Section 112(2) rejection relative to "crystalline and amorphous materials" recited in claim 1 is also improper because the rejection is based upon a technically incorrect and unsupported interpretation of a "phase change material," and upon an unsupported requirement that the claim must address where the materials "come from." Specifically, the assertion that "the phase change material is singular and would be contradictory if the phase change material contained both crystalline and amorphous materials" is untenable. As described in the specification and well known in the art, a phase change material may likely include material that changes between crystalline and amorphous stages, and thus the same material can be crystalline and amorphous,

depending upon its current phase. During a phase change, both crystalline and amorphous materials may be present (*e.g.*, with an intersection between these materials, and the intersection progressing across the material as it changes phase). This is consistent with multiple examples described throughout the specification and shown in the figures. The Section 112(2) rejection is therefore clearly erroneous and should be removed.

In view of the above, Applicant believes that the Section 102 and 103 rejections are also improper because these rejections rely upon the Section 112 rejections (as indicated at page 2 of the Office Action), in apparently ignoring limitations upon which the Section 112 rejection is based.

Applicant further traverses the Section 102 and 103 rejections because the Office Action's assertion that the claimed phase change material and related amorphous/crystalline structure "do not carry patentable weight" is contrary to the claims, disclosure and relevant law. The Office Action again appears to misunderstand the technology at issue, indicating that the "final structure is a crystallized phase change material." Applicant submits that the claimed invention and related technology involves structures that may change between phases (*e.g.*, a reversible change) corresponding to different resistance states. In this regard, there is no "final structure" as asserted and the claimed properties of the phase change material are not "methods used to make this crystalline structure" as asserted. In this regard, the Office Action's attempt to show correspondence to the claimed invention, ignoring these limitations, is improper.

Applicant also traverses the Section 102 and 103 rejections because the Office Action's suggestion that the '839 reference "inherently" discloses the claimed invention simply because it discloses a material that falls into an example range of materials disclosed in the instant application stops short of showing correspondence to the claimed invention as a whole. Specifically, page 3 of the Office Action cites to a Te-Ge-Sb alloy in the '839 reference and alleges that this material discloses the claimed invention because respective compositions of Te, Ge and Sb fall into ranges present in claim 9. However, the '839 reference does not disclose, discuss or appear to contemplate a phase change material as claimed, and fails to show or explain how the material either would be arranged with other limitations or could operate as claimed. For instance, the Office Action has not asserted that (or described how) the cited Te-Ge-Sb alloy in the '839

reference would transition phase as claimed, via crystallization at an interface, as may be relevant to the material's arrangement in a resistor as claimed and/or operation via conducting current. In this regard, the allegedly "inherent" properties are not shown to be proper and would not be present in the cited '839 reference because the reference makes use of materials and approaches that are wholly different in nature and operation, relative to the claimed invention. The rejections based upon allegedly "inherent" characteristics are thus unsupported, and the Office Action has thus failed to show correspondence, teaching or suggestion of the claimed invention.

In addition to the above, the Office Action has failed to assert correspondence to limitations in various claims, including those directed to growth rate, compositions and materials. Other limitations are ignored as a whole. Specifically regarding the rejection of claim 18 and as applicable to claims 19-22 that depend therefrom, the cited references provide no correspondence to limitations including those directed to a fast growth phase change material that changes phase in response to an electrical pulse, and a resistor that has a resistance dependent upon the phase of the phase change material.

Specifically regarding the Section 103(a) rejection of claim 8 over the sole '839 reference, the Office Action has again failed to address Applicant's traversals as required under M.P.E.P. 707.07(f). Moreover, the Office Action provides no rationale, from the prior art or otherwise, in support of the notion that one of skill in the art would somehow have optimized the claimed invention using routine skill where there is no suggestion to do so. Therefore, Applicant submits that the Section 103 rejection of claim 8 is improper and should be removed.

In view of the above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063.

Please direct all correspondence to:

Corporate Patent Counsel
NXP Intellectual Property & Standards
1109 McKay Drive; Mail Stop SJ41
San Jose, CA 95131

CUSTOMER NO. 65913

By: 

Name: Robert J. Crawford
Reg. No.: 32,122
651-686-6633 x2300
(NXPS.443PA)